

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
20 January 2005 (20.01.2005)

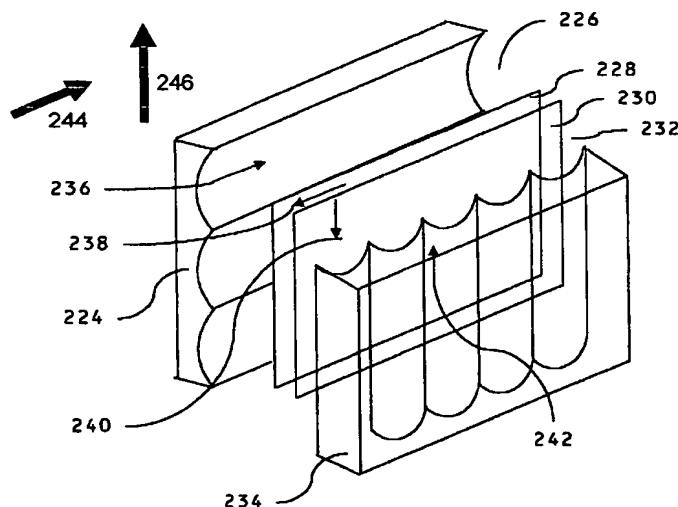
PCT

(10) International Publication Number  
**WO 2005/006774 A1**

- (51) International Patent Classification<sup>7</sup>: **H04N 13/00**, G02B 27/22
- (21) International Application Number:  
PCT/GB2004/002984
- (22) International Filing Date: 9 July 2004 (09.07.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:  
0316222.9 10 July 2003 (10.07.2003) GB
- (71) Applicant (for all designated States except US): **OCUITY LIMITED** [GB/GB]; 77 Heyford Park, Upper Heyford, Oxfordshire OX25 5HD (GB).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): **WOODGATE, Graham, John** [GB/GB]; 9 Vicarage Road, Henley-on-Thames, Oxfordshire RG9 1HF (GB). **HARROLD, Jonathan** [GB/GB]; 8 Robins Grove, Warwick, Warwickshire CV34 6RF (GB).
- (74) Agents: **MERRYWEATHER, Colin, Henry** et al.; J.A. Kemp & Co., 14 South Square, Gray's Inn, London WC1R 5JJ (GB).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: LENS ARRAY STRUCTURE



(57) Abstract: A lens array structure comprises two birefringent lens arrays arranged in series, both being capable of operating to direct incident light of one polarisation into a respective directional distribution and to have substantially no effect on incident light of a polarisation perpendicular to said one polarisation. The lens arrays are relatively oriented such that incident light of two perpendicular polarisation components are directed into a directional distribution by a respective one of the birefringent lens arrays and not affected by other one of the birefringent lens arrays. Thus control of the polarisation allows switching between the effects of the two lens arrays. To allow switching into a third mode in which neither of the lens arrays has effect, one of the lens arrays may be active. The lens structure may be employed in a display apparatus to provide a switchable directional display.

WO 2005/006774 A1



**Published:**

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*